Students' and Teachers' Perceptions of Education: Differences in Perspectives

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ABSTRACT

Teachers and students have their own perspectives on education. Congruent perspectives contribute to facilitating teaching-learning processes and help to achieve optimal learning outcomes. This study investigates both teachers' and students' perceptions on a learning environment in Dutch secondary education. It is aimed to define which students are at risk experiencing adverse discrepancies to their teachers' perceptions. Additionally, teacher profiles are defined on their discrepancies to students' perceptions.

All tenth graders (*N* = 994) of four schools and their teachers (*N* = 136) filled out the Inventory of Perceived Study Environment Extended. In addition, students filled out the Inventory Learning Styles (ILS-SE) and teachers completed the Approaches to Teaching Inventory (ATI). By using Latent Class Analyses profiles in difference scores were defined. Profiles were characterized by analyzing differences on the ILS-SE and ATI.

Teachers' perceptions were mostly more positive than students' perceptions. LCA profiles showed a 'distal' student profile which was at highest risk and experienced most motivational problems. Also, for the 'intermediate' student profile the discrepancy between perceptions was related to negative learning-related characteristics. Analyzing teacher profiles, 'idealistic' teachers were at risk to cause destructive friction.

This study stresses the importance of improving congruence between perceptions. Future research has to focus on effective interventions. Improving teachers' immersion in the students' perspective or including students in the instructional design process to better account for their perceptions might be beneficial.

EXTENDED SUMMARY

AIMS

Teachers and students have different perceptions of the same learning environment. Teachers tend to perceive it more favorable than their students do (Fraser & O'Brien, 1985). A good fit between students' competences and interests, and the design of the learning environment influences effectiveness of learning and commitment to study (Neuenschwander, 2008). Some friction between students' learning strategies and teacher's teaching strategies can have a positive effect by stimulating students to develop more mature learning

strategies (i.e., constructive friction). But friction can also cause a decrease in learning and thinking skills when discrepancies are too large (i.e., destructive friction; Vermunt & Verloop, 1999).

In today education, there has to be mutual adaptation of teachers' and students' responsibilities and tasks. This requires more collaboration between teachers and students, which stresses the importance of congruence between their perspectives on education. The problem with existing studies on differences between students' and teachers' perceptions is that it is difficult how to improve instruction on global information about differences in perceptions. Therefore, the main goal of the current study is to investigate the existence of meaningful student profiles with respect to their difference in perceptions compared to their teachers. At the same time, it is aimed to determine profiles for teachers. Comparing these subgroups with respect to learning-related characteristics (for students) and approaches to teaching (for teachers) enables to define which students and teachers are at highest risk to experience large discrepancies that might cause destructive friction.

METHODOLOGY

Participants were 994 tenth grade students and 136 teachers from four schools for secondary education. Students filled out two questionnaires: The Inventory of Perceived Study Environment Extended (IPSEE) and the Inventory of Learning Styles for Secondary Education (ILS-SE). The IPSEE (Könings et al., 2008) includes eight scales: Fascinating contents, productive learning, integration, student autonomy, interaction, differentiation, clarity of goals, and personalization. The ILS-SE (Picarelli et al., 2006) measures students' learning-related characteristics and consists of 16 scales about processing strategies, regulation strategies, motivational orientations, conceptions of learning, and affective processing strategies.

Teachers filled out two questionnaires: (1) a parallel version of the IPSEE (teacher version), measuring perceptions with respect to the learning environment, and (2) Approaches to Teaching Inventory (Prosser & Trigwell, 1993), measuring teaching approaches: Information-transmission/teacher-focused and conceptual-change/student-focused.

For each student, difference scores were computed between perception scores and the mean teachers' score on the corresponding scale (called 'student

differences'). Additionally, difference scores were computed between the teacher's perception scores and the mean of student scores (called 'teacher differences'). Using Latent Class Analysis (LCA) we defined profiles with respect to both student differences and teacher differences.

RESULTS

Student Differences.

The LCA solution with three latent classes fits the data best. These three student profiles vary in the degree to which student perceptions differ from teacher perceptions. All students predominantly perceived the learning environment less positive than teachers did. Students in the '*closest match profile*' showed smallest differences between students' and teachers' perceptions. Difference scores in the '*intermediate profile*' were larger than in the closest match profile, but smaller than in the third profile, called '*distal profile*'.

ANOVA's on differences with respect to student characteristics (ILS-SE) yielded a number of significant differences so that results with $d \geq .40$ are summarized. Closest match students reported more use of self-regulation strategies than intermediate students. They were more vocation-oriented, more intrinsically motivated, and less ambivalent motivated than all other students. They conceived learning more as construction and use of knowledge than others. Finally, closest match students experienced less motivation/concentration problems than distal students.

Teacher Differences.

LCA yielded a two class solution. Teachers in the *'idealistic profile'* perceived the learning environment as much more powerful than their students. Teachers in the '*adaptive profile*' had smaller discrepancies with students' perceptions and, additionally, they showed mixed differences across scales. Teachers with idealistic profile had lower scores on information transmission (d = .53) and higher scores on conceptual change (d = .69) than teachers with adaptive profile.

DISCUSSION

This study aimed at identifying students and teachers who are at risk for experiencing large discrepancies in their perspectives on education. LCA enabled us to define student' and teacher' profiles that provide a comparative picture of

the situation. It showed that the distal student profile is at highest risk and experience most motivational problems. Substantial differences were found between student characteristics of closest match students and distal/intermediate students, but not between distal and intermediate students. This implicates that, also, for the largest group of students (i.e., intermediates; 59 %) the discrepancy related to negative learning-related characteristics. From the teachers' perspective it is shown that idealistic teachers are at risk to be too progressive and to cause destructive friction, especially for distal and intermediate students. Otherwise, adaptive teachers may cause *destructive congruence* (i.e., too little challenge) for closest match students.

This study stresses the importance of improving congruence between perspectives of students and teachers, since the majority of the students experience substantial discrepancies. Teachers' immersion in the students' perspective and adaptation of instruction may prevent losing them during educational innovations. Another possibility would be to include students in the instructional design process (i.e., participatory design) to be able to better account for students' perspectives. Future research has to focus on finding effective interventions to decrease discrepancies.

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